Georgia's Revised MOBILE6 Registration Distribution by Age

Overview

R.L. Polk & Co. (Polk) maintains databases encompassing all registered vehicles in operation by state. Polk acquires the source registration data from the states and then processes and enhances the data. Key data elements Polk used for grouping vehicle registered in Georgia by their appropriate composite (i.e., gasoline and diesel) MOBILE6 vehicle types were: vehicle make, vehicle model, engine make, engine model, fuel type, cab type, bed length, wheel configuration, vehicle type, gross vehicle weight rating (GVWR)[1] class, model year, and registration geography (i.e., county).

Vehicle characteristic data elements used by Polk are derived from the unique 17 position vehicle identification number (VIN) assigned to every vehicle. Vehicle geography is assigned based on the registration address linked to each VIN.

In order to assign a MOBILE6 category to all registered vehicles, Polk constructed a master vehicle workfile using data from Polk's TIPNet and NVPP databases. This master vehicle workfile accounts for all registered vehicles, including: cars, vans, sport utility vehicles, trucks, buses, school buses, and motorcycles (GVWR classes 1-8 + motorcycle). The GVWR classes are:

Class 1   0 - 6,000 lbs.
Class 2   6,001 - 10,000 lbs.
Class 3   10,001 - 14,000 lbs.
Class 4   14,001 - 16,000 lbs.
Class 5   16,001 - 19,500 lbs.
Class 6   19,501 - 26,000 lbs.
Class 7   26,001 - 33,000 lbs.
Class 8   33,001 - 150,000 lbs.

The TIPNet database contains vehicles from full-size pickups/vans through class 8 (GVWR classes 1c-8), and is structured to serve the commercial vehicle market. The NVPP database contains vehicles GVWR classes 1-3 and is designed to serve the car, light truck/van, and motorcycle aftermarket.

Using the data elements listed above, Polk assigned one of the 16 MOBILE6 categories to each of the vehicles in the workfile. Care was taken to assure that no makes and models are duplicated between the two databases. Note that the unit volume for same make/model vehicles can be divided among two or more MOBILE6 categories due to varying vehicle types and GVWR classes within a specific make/model. TIPNet data supplies GVWR classes 1c-8 (full-size pickups/vans & heavier), while NVPP data provides passenger car, motorcycle, light truck, and light vans from GVWR class 1.

The 16 composite MOBILE6 vehicle types are listed and defined below, with examples of the types of vehicles they include.

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[1] The GVWR is the maximum weight of the vehicle when it is fully loaded, as specified by the manufacturer.

Georgia's Revised MOBILE6 Registration Distribution by Age – continued

Number	Abbreviation	Description

1   **LDV**   **Light-Duty Vehicles (Passenger Cars)**
- Class 1 GVWR
- Include: Passenger Cars
- Fuel: All Types
- Source: R.L. Polk NVPP as of October 2002

2   **LDT1**   **Light-Duty Trucks 1 (0-6,000 lbs. GVWR, 0-3,750 lbs. LVW[2])**
- Class 1 GVWR
- Trucks, SUVs, & Vans
- Exclude Full-Size Pickups & Vans
- Fuel: All Types
- Source: R.L. Polk NVPP as of October 2002

3   **LDT2**   **Light-Duty Trucks 2 (0-6,000 lbs. GVWR, 3,751-5,750 lbs. LVW)**
- Class 1 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Include all Full-Size Pickups & Vans (e.g. 150/1500 series vehicles: F150, C/K 1500, E150, Ram 1500 etc.)
- Include Vehicle Types: Incomplete Pickup + Cab Chassis
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003 & NVPP as of October 2002

4   **LDT3**   **Light-Duty Trucks 3 (6,001-8,500 lbs. GVWR, 0-5,750 lbs. ALVW[3])**
- Class 2 GVWR
- Trucks, SUVs, & Vans
- GVWR: 6,001-8,000 for Ford, Chevy, Dodge, plus all Toyota Tundra Models
- Fuel: All Types
- Exclude: Pickups with Long Bed or Vans with Extended Length (Except Tundra)
- Exclude Vehicle Types: Incomplete Pickup + Cab Chassis + Incomplete Vehicle + Straight Truck + School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003 & NVPP as of October 2002

5   **LDT4**   **Light-Duty Trucks 4 (6,001-8,500 lbs. GVWR, >5,750 lbs. ALVW)**
- Class 2 GVWR
- Trucks, SUVs, & Vans
- GVWR: 6,001-8,000 for Ford, Chevy, & Dodge
- Exclude: all Toyota Tundra Models
- Fuel: All Types
- Include: Pickups with Long Bed or Vans with Extended Length
- Include Vehicle Types: Incomplete Pickup + Cab Chassis + Incomplete Vehicle + Straight Truck
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

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[2] Loaded vehicle weight, the weight of vehicle sitting empty (curb weight) plus 300 pounds.
[3] Adjusted loaded vehicle weight, average of the gross vehicle weight and the curb weight.

Georgia's Revised MOBILE6 Registration Distribution by Age – continued

Number	**Abbreviation**	**Description**

6   **HDV2B**   **Class 2b Heavy-Duty Vehicles (8,501-10,000 lbs. GVWR)**
- Class 2 GVWR
- Trucks, SUVs, & Vans
- GVWR: 8,001-10,000 for Ford, Chevy, & Dodge
- Exclude: All Toyota Tundra Models
- Fuel: All Types
- Include: Pickups with Long Bed or Vans with Extended Length
- Include Vehicle Types: Incomplete Pickup + Cab Chassis + Incomplete Vehicle + Straight Truck
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

7   **HDV3**   **Class 3 Heavy-Duty Vehicles (10,001-14,000 lbs. GVWR)**
- Class 3 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

8   **HDV4**   **Class 4 Heavy-Duty Vehicles (14,001-16,000 lbs. GVWR)**
- Class 4 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

9   **HDV5**   **Class 5 Heavy-Duty Gasoline Vehicles (16,001-19,500 lbs. GVWR)**
- Class 5 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

10   **HDV6**   **Class 6 Heavy-Duty Vehicles (19,501-26,000 lbs. GVWR)**
- Class 6 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

11   **HDV7**   **Class 7 Heavy-Duty Vehicles (26,001-33,000 lbs. GVWR)**
- Class 7 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Source: R.L. Polk TIPNet as of March 2003

Georgia's Revised MOBILE6 Registration Distribution by Age – continued

Number	Abbreviation	Description

12   **HDV8A**   **Class 8a Heavy-Duty Vehicles (33,001-60,000 lbs. GVWR)**
- Class 8 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: School Bus + Bus Non-School (Coach)
- Include Vehicle Types: 4x2 Non-Tractor Vehicles + All Tractors + Motor Home Chassis
- Source: R.L. Polk TIPNet as of March 2003

13   **HDV8B**   **Class 8b Heavy-Duty Vehicles (>60,000 lbs. GVWR)**
- Class 8 GVWR
- Trucks, SUVs, & Vans
- Fuel: All Types
- Exclude Vehicle Types: All Tractors + School Bus + Bus Non-School (Coach)
- Exclude Wheels: 4x2
- Source: R.L. Polk TIPNet as of March 2003

14   **HDBS**   **School Buses**
- Include Vehicle Type: School Bus
- Fuel: All Types
- Source: R.L. Polk TIPNet as of March 2003

15   **HDBT**   **Transit & Urban Buses**
- Include Vehicle Type: Bus Non-School (Coach)
- Fuel: All Types
- Source: R.L. Polk TIPNet as of March 2003

16   **MC**   **Motorcycles (All)**
- Fuel: All Types
- Source: R.L. Polk NVPP as of October 2002

The data acquired from Polk was queried to determine the number of vehicles registered in the 13-county Atlanta nonattainment area by age and MOBILE6 vehicle type. Results of this query were used to develop MOBILE6 registration distribution by age inputs. For each of the 16 composite MOBILE6 vehicle types, the fraction of all vehicles of that type which are zero-to-one model year old, two model years old, three model years old, etc., up to the oldest category, 25-model-years-and-older, was determined. The resulting MOBILE6 input data is shown on the following two pages. Note that the Polk-derived distribution for Class 8b vehicles (MOBILE6 vehicle type 13) is commented out; MOBILE6 defaults were used for these.

```
REG DIST
*
* The file REGDATA.D contains the default MOBILE6 values for the distribution of
* vehicles by age for July of any calendar year.  There are sixteen (16)
* sets of values representing 16 combined gasoline/diesel vehicle class
* distributions.  These distributions are split for gasoline and diesel
* using the separate input (or default) values for diesel sales fractions.
* Each distribution contains 25 values which represent the fraction of
* all vehicles in that class (gasoline and diesel) of that age in July.
* The first number is for age 1 (calendar year minus model year plus one)
* and the last number is for age 25.  The last age includes all vehicles
* of age 25 or older.  The first number in each distribution is an integer
* which indicates which of the 16 vehicle classes are represented by the
* distribution.  The sixteen vehicle classes are:
*
*  1  LDV    Light-Duty Vehicles (Passenger Cars)
*  2  LDT1   Light-Duty Trucks 1 (0-6,000 lbs. GVWR, 0-3750 lbs. LVW)
*  3  LDT2   Light Duty Trucks 2 (0-6,001 lbs. GVWR, 3751-5750 lbs. LVW)
*  4  LDT3   Light Duty Trucks 3 (6,001-8500 lbs. GVWR, 0-3750 lbs. LVW)
*  5  LDT4   Light Duty Trucks 4 (6,001-8500 lbs. GVWR, 3751-5750 lbs. LVW)
*  6  HDV2B  Class 2b Heavy Duty Vehicles (8501-10,000 lbs. GVWR)
*  7  HDV3   Class 3 Heavy Duty Vehicles (10,001-14,000 lbs. GVWR)
*  8  HDV4   Class 4 Heavy Duty Vehicles (14,001-16,000 lbs. GVWR)
*  9  HDV5   Class 5 Heavy Duty Vehicles (16,001-19,500 lbs. GVWR)
* 10  HDV6   Class 6 Heavy Duty Vehicles (19,501-26,000 lbs. GVWR)
* 11  HDV7   Class 7 Heavy Duty Vehicles (26,001-33,000 lbs. GVWR)
* 12  HDV8A  Class 8a Heavy Duty Vehicles (33,001-60,000 lbs. GVWR)
* 13  HDV8B  Class 8b Heavy Duty Vehicles (>60,000 lbs. GVWR)
* 14  HDBS   School Busses
* 15  HDBT   Transit and Urban Busses
* 16  MC     Motorcycles (All)
*
* The 25 age values are arranged in two rows of 10 values followed by a row
* with the last 5 values.  Comments (such as this one) are indicated by
* an asterisk in the first column. Empty rows are ignored.  Values are
* read "free format," meaning any number may appear in any row with as
* many characters as needed (including a decimal) as long as 25 values
* follow the initial integer value separated by a space.
*
* If all 16 vehicle classes do not need to be altered from the default
* values, then only the vehicle classes that need to be changed need to
* be included in this file.  The order in which the vehicle classes are
* read does not matter, however each vehicle class set must contain 25
* values and be in the proper age order.
* _____
*
* This file specifies the local registration distribution by age
* (MOBILE6 defaults for heavy-heavy-duties) for the 13-county Atlanta
* nonattainment area.
* Sources of registration data:  R. L. Polk & Co.'s National Vehicle
* Population Profile (R) as of October 2002 and R. L. Polk & Co.'s
* TIPNet (R) as of March 2003.
*
* LDV
1  0.0238 0.0712 0.0687 0.0771 0.0729 0.0671 0.0689 0.0656 0.0763 0.0618
   0.0559 0.0461 0.0399 0.0370 0.0325 0.0267 0.0214 0.0166 0.0126 0.0089
   0.0054 0.0032 0.0026 0.0023 0.0354

* LDT1
2  0.0307 0.1252 0.1152 0.1191 0.0915 0.0859 0.0689 0.0626 0.0596 0.0513
   0.0412 0.0261 0.0227 0.0155 0.0163 0.0139 0.0122 0.0093 0.0058 0.0039
   0.0023 0.0014 0.0009 0.0006 0.0178

* LDT2
3  0.0040 0.0132 0.0896 0.0494 0.0367 0.0774 0.1014 0.0002 0.0205 0.0378
   0.0480 0.0415 0.0384 0.0566 0.0589 0.0649 0.0421 0.0538 0.0474 0.0395
   0.0282 0.0227 0.0278 0.0000 0.0000
```

```
* LDT3
4  0.0627 0.1758 0.1558 0.1027 0.0921 0.0512 0.0582 0.0554 0.0554 0.0440
   0.0229 0.0174 0.0111 0.0125 0.0135 0.0108 0.0115 0.0133 0.0122 0.0092
   0.0058 0.0039 0.0027 0.0000 0.0000

* LDT4
5  0.0210 0.0636 0.0778 0.0756 0.0718 0.0501 0.0546 0.0552 0.0836 0.0737
   0.0546 0.0449 0.0365 0.0440 0.0504 0.0385 0.0240 0.0214 0.0194 0.0191
   0.0126 0.0050 0.0024 0.0000 0.0000

* HDV2B
6  0.0613 0.1508 0.1166 0.1022 0.0976 0.0405 0.0653 0.0484 0.0452 0.0337
   0.0285 0.0195 0.0161 0.0194 0.0240 0.0264 0.0148 0.0223 0.0217 0.0170
   0.0104 0.0097 0.0075 0.0002 0.0008

* HDV3
7  0.0436 0.1152 0.1269 0.1138 0.1180 0.0412 0.0567 0.0443 0.0518 0.0435
   0.0272 0.0227 0.0190 0.0253 0.0266 0.0248 0.0182 0.0227 0.0156 0.0126
   0.0062 0.0051 0.0031 0.0012 0.0147

* HDV4
8  0.0341 0.0879 0.1057 0.1360 0.1267 0.0529 0.0835 0.0551 0.0627 0.0406
   0.0341 0.0191 0.0180 0.0216 0.0335 0.0282 0.0126 0.0084 0.0099 0.0086
   0.0057 0.0037 0.0014 0.0003 0.0098

* HDV5
9  0.0554 0.1030 0.1239 0.1313 0.1482 0.0330 0.0683 0.0529 0.0484 0.0293
   0.0218 0.0178 0.0079 0.0107 0.0075 0.0065 0.0111 0.0049 0.0045 0.0070
   0.0050 0.0039 0.0065 0.0010 0.0901

* HDV6
10 0.0203 0.0362 0.0744 0.1076 0.1035 0.0801 0.0549 0.0462 0.0660 0.0355
   0.0304 0.0249 0.0217 0.0202 0.0194 0.0250 0.0198 0.0179 0.0208 0.0148
   0.0090 0.0082 0.0079 0.0051 0.1303

* HDV7
11 0.0765 0.0383 0.0646 0.0648 0.0639 0.0495 0.0357 0.0402 0.0622 0.0399
   0.0341 0.0357 0.0426 0.0427 0.0601 0.0549 0.0356 0.0332 0.0364 0.0231
   0.0113 0.0081 0.0106 0.0161 0.0200

* HDV8A
12 0.0588 0.0966 0.1287 0.0953 0.0880 0.0578 0.0489 0.0547 0.0514 0.0367
   0.0390 0.0204 0.0180 0.0208 0.0292 0.0263 0.0276 0.0204 0.0321 0.0128
   0.0071 0.0056 0.0057 0.0055 0.0127

* HDV8B
*13 0.0288 0.0384 0.0796 0.0885 0.0852 0.0444 0.0576 0.0469 0.1047 0.0501
*   0.0455 0.0292 0.0343 0.0388 0.0286 0.0363 0.0197 0.0183 0.0251 0.0117
*   0.0053 0.0054 0.0057 0.0116 0.0601

* HDBS
14 0.0374 0.0570 0.0505 0.0734 0.0639 0.0734 0.0491 0.0664 0.0805 0.0243
   0.0610 0.0473 0.0675 0.0771 0.0306 0.0506 0.0132 0.0104 0.0121 0.0097
   0.0071 0.0049 0.0059 0.0078 0.0191

* HDBT
15 0.0029 0.0279 0.0999 0.1233 0.0602 0.0595 0.0426 0.0587 0.0206 0.0492
   0.0286 0.0477 0.0066 0.1740 0.0382 0.0668 0.0125 0.0250 0.0117 0.0081
   0.0125 0.0147 0.0088 0.0000 0.0000

* MC
16 0.0005 0.1005 0.1186 0.0993 0.0751 0.0612 0.0535 0.0478 0.0397 0.0362
   0.0339 0.3336 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000
   0.0000 0.0000 0.0000 0.0000 0.0000
```